#### **DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

## EMBEDDED NANOTUBE ARRAY SENSOR AND METHOD OF MAKING A NANOTUBE POLYMER COMPOSITE

NANOTOBE FOLTMER COMI OSITE			
(Attorney Docket No. 047182-0141)			
the specification of	f which (check one)		
<u>·                                     </u>	is attached hereto.		
<u>X</u>	was filed on <u>06/09/2005</u> as United States Application Number or PCT International Application Number <u>10/537,944</u> and was amended on (if applicable).		

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?
				·

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/431,834	12/09/2002

U.S. Parent	PCT Parent	Parent	Parent
Application Number	Application Number	Filing Date	Patent Number
	PCT/US2003/038746	12/09/2003	

#### 22428

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Stephen B. Maebius FOLEY & LARDNER LLP Customer Number: 22428

Telephone: (202) 672-5569 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

Name of first inventor	Pulickel AJAYAN	
Residence	Troy, New York	
Citizenship	India	
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590	
Inventor's signature	m -	
Date	04/4/06	

Name of second inventor	Emer LAHIFF
Residence	
Citizenship	Ireland
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	·····
	<del></del>
Name of third inventor	Paul STRYJEK
Residence	Troy, New York
Citizenship	USA
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	
_	
Name of fourth inventor	Chang Y. RYU
Residence	Troy, New York
Citizenship	Korea
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	
Name of fifth inventor	Seamus CURRAN
Residence	
Citizenship	Ireland
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
mi ontoi b bibilatare	
Date	

#### **DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

# EMBDDED NANOTUB ARRAY SENSOR AND METHOD OF MAKIG A NANOTUB POLYMER COMPOSITE

	(Attorney Doket No. 047182-0141 )
the specification of	of which (check one)
	is attached hereto.
<u>X</u>	was filed on <u>06/09/2005</u> as United States Application Number or PCT International Application Number <u>10/537,944</u> and was amended on (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?
			,	·

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/431,834	12/09/2002
00/431,034	12/0//2002

U.S. Parent	PCT Parent	Parent	Parent
Application Number	Application Number	Filing Date	Patent Number
	PCT/US2003/038746	12/09/2003	

#### 22428

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Stephen B. Maebius FOLEY & LARDNER LLP Customer Number: 22428

Telephone: (202) 672-5569 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

Name of first inventor	Pulickel AJAYAN
Residence	Troy, New York
Citizenship	India
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	

Name of second inventor	Emer LAHIFF
Residence	41 Sutton Park, Dublin 13.
Citizenship	Ireland
•	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street
	Troy, New York 12180-3590
Inventor's signature	Emis Lanth
Date	20 March 2006
Name of third inventor	Paul STRYJEK
Residence	Troy, New York
•	USA
Citizenship	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street
	Troy, New York 12180-3590
Inventor's signature	
Date	
Name of fourth inventor	Chang Y. RYU
Residence	Troy, New York
Citizenship	Korea
	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street
	Troy, New York 12180-3590
Inventor's signature	
Date	
Name of fifth inventor	Seamus CURRAN
Residence	
Citizenship	Ireland
	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street Troy, New York 12180-3590
Inventoric cionature	110y, 110W 10IK 12100-3330
Inventor's signature	
Date	· · · · · · · · · · · · · · · · · · ·

#### **DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE: -

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

# EMBEDDED NANOTUBE ARRAY SENSOR AND METHOD OF MAKING A NANOTUBE POLYMER COMPOSITE

(Attorney Docket No. 047182-0141)		
the specification of	which (check one)	
.——	is attached hereto.	
<u>X</u>	was filed on <u>06/09/2005</u> as United States Application Number or PCT International Application Number <u>10/537,944</u> and was amended on (if applicable).	

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?
		·		

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

J.S. Provisional Application Number	Filing Date
60/431,834	12/09/2002

U.S. Parent	PCT Parent	Parent	Parent
Application Number	Application Number	Filing Date	Patent Number
	PCT/US2003/038746	12/09/2003	
	·		

#### 22428

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Stephen B. Maebius FOLEY & LARDNER LLP Customer Number: 22428

Telephone: (202) 672-5569 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

Name of first inventor	Pulickel AJAYAN
Residence	Troy, New York
Citizenship	India
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	

Name of second inventor	Emer LAHIFF
Residence	•
Citizenship —	Ireland
	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street
	Troy, New York 12180-3590
Inventor's signature	
Date	
Name of third inventor	Paul STRYJEK
Residence	Troy, New York
Citizenship —	USA
	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street
	Troy, New York 12-180-3590
Inventor's signature	fail Stuppl
Date	3/29/06
Name of fourth inventor	Chang Y. RYU
Residence	Troy, New York
Citizenship	Korea
	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street Troy, New York 12180-3590
Inventor's signature	110y, New 10tk 12180-3390
Date	· · · · · · · · · · · · · · · · · · ·
Name of fifth inventor	Seamus CURRAN
Residence	
· ——	Ireland
Citizenship	c\o RENSSELAER POLYTECHNIC INSTITUTE
Post Office Address	110 8th Street
	Troy, New York 12180-3590
Inventor's signature	
Date	

#### **DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

## EMBEDDED NANOTUBE ARRAY SENSOR AND METHOD OF MAKING A NANOTUBE POLYMER COMPOSITE

	(Attorney Docket No. 047182-0141)
the specification of	which (check one)
	is attached hereto.
<u>X</u>	was filed on <u>06/09/2005</u> as United States Application Number or PCT International Application Number <u>10/537,944</u> and was amended on (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?
	. ,			

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/431,834	12/09/2002
	·

U.S. Parent	PCT Parent	Parent	Parent
Application Number	Application Number	Filing Date	Patent Number
	PCT/US2003/038746	12/09/2003	

#### 22428

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Stephen B. Maebius FOLEY & LARDNER LLP Customer Number: 22428

Telephone: (202) 672-5569 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

Name of first inventor	Pulickel AJAYAN
Residence	Troy, New York
Citizenship	India
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	

Name of second inventor	Emer LAHIFF
Residence	
Citizenship	Ireland
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	
•	· · · · · · · · · · · · · · · · · · ·
Name of third inventor	Paul STRYJEK
Residence	Troy, New York
Citizenship	USA
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	
•	
Name of fourth inventor	Chang Y. RYU
Residence	Troy, New York
Citizenship	Korea
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	Trans-Jul Kill
Date	March 29, 20060
Name of fifth inventor	Seamus CURRAN
Residence	
Citizenship	Ireland
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	

## DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

# EMBEDDED NANOTUBE ARRAY SENSOR AND METHOD OF MAKING A NANOTUBE POLYMER COMPOSITE (Attorney Docket No. 047182-0141) the specification of which (check one) is attached hereto. X was filed on 06/09/2005 as United States Application Number or PCT International Application Number 10/537.944 and was amended on \_\_\_\_\_\_\_ (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

S. Provisional Application Number	Filing Date
60/431,834	12/09/2002

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number
	PCT/US2003/038746	12/09/2003	

## I HEREBY APPOINT the registered attorneys and agents at Customer Number

#### 22428

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Stephen B. Macbius
FOLEY & LARDNER LLP
Customer Number: 22428

Telephone: (202) 672-5569 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

Name of first inventor	Pulickel AJAYAN
Residence	Troy, New York
Citizenship	India
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street
Inventor's signature	Troy, New York 12180-3590
Date	
-	

Name of second inventor	Emer LAHIFF
Residence	
Citizenship	Ireland
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street
Inventor's signature	Troy, New York 12180-3590
Date	
Name of third inventor	Paul STRYJEK
Residence	Troy, New York
Citizenship	USA
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street
Inventor's signature	Troy, New York 12180-3590
Date	
Name of fourth inventor Residence	Chang Y. RYU  Troy, New York
Citizenship	Korea
Post Office Address	c/o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street Troy, New York 12180-3590
Inventor's signature	
Date	
Name of fifth inventor	Seamus CURRAN
Residence	Las Cruces III a som
Citizenship	Iteland / No. 8800/
Post Office Address	c\o RENSSELAER POLYTECHNIC INSTITUTE 110 8th Street
Inventor's signature	Troy, New York 12180-3590
Date	08 Jun 9 011
~~~	